

Second Five-Year Review Report

Woodstock Municipal Landfill Superfund Site City of Woodstock McHenry County, Illinois

August 2009

Pursuant to CERCLA

EPA Region 5 Records Ctr.



335949

PREPARED BY:
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Approved by:

A handwritten signature in black ink, appearing to read "Richard C. Karl", written over a horizontal line.

Richard C. Karl, Director
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Date

8/20/09

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List of Acronyms

Code of Federal Regulations	CFR
Comprehensive Environmental Response, Compensation and Liability Act (Superfund)	CERCLA
Conestoga-Rovers & Associates	CRA
Contaminant of Concern	COC
Institutional Controls	ICs
Maximum Contaminant Levels	MCLs
National Contingency Plan	NCP
National Priorities List	NPL
Operation and Maintenance	O&M
Polychlorinated Biphenyls	PCBs
Potentially Responsible Parties	PRPs
Preliminary Close-out Report	PCOR
Ready for Reuse	RfR
Record of Decision	ROD
Remedial Action Objective	RAO
Remedial Design/Remedial Action	RD/RA
Remedial Investigation/Feasibility Study	RI/FS
Remedial Project Manager	RPM
Uniform Environmental Covenants Act	UECA
Unilateral Administrative Order	UAO
Unlimited Use and Unrestricted Exposure	UU/UE
United States Environmental Protection Agency	EPA

Second Five-Year Review Report

Executive Summary

August 2009

Woodstock Municipal Landfill Superfund Site McHenry County, Illinois

The assessment of this second Five-Year Review found that the remedy was implemented in accordance with the requirements of the Record of Decision (ROD). The United States Environmental Protection Agency (EPA) selected the remedy in the June 30, 1993 ROD and July 15, 1998 ROD Amendment. The trigger action date for this second Five-Year Review is August 23, 2004, the issuance date of the first five-year review report.

The remedy selected in the June 30, 1993 Site ROD and July 15, 1998 Site ROD Amendment has been implemented under the November 3, 1999 Unilateral Administrative Order (UAO) to the City of Woodstock and Allied Signal Corporation (potentially responsible parties (PRPs)).

The remedy for the Woodstock Municipal Landfill consists of a geosynthetic clay cover or “cap” over the landfill; ground water extraction, treatment, and discharge; cap and ground water monitoring; and institutional controls (ICs). The ROD Amendment allowed for natural attenuation of the vinyl chloride plume, with groundwater extraction, treatment, and discharge as a contingent remedy; and mitigation of wetland areas impacted by the remedial action.

The remedy selected in the 1993 ROD and 1998 ROD Amendment continues to be protective of human health and the environment in the short term. The existing Site use is consistent with the objectives set forth in the ROD and ROD Amendment. The implemented remedial actions at the Woodstock Municipal Landfill Site are functioning as intended. All immediate threats at the Site have been addressed through capping of the waste material, passive venting of landfill gases, and site fencing. There is no current use of contaminated Site ground water.

Long-term protectiveness requires maintenance of the cover and compliance with land use restrictions that prohibit interference with the cap, restrict the Site to limited commercial/industrial uses and prohibit the use of ground water under and downgradient of the landfill. Compliance with ICs will be accomplished by planning for long-term stewardship which includes maintaining, monitoring and enforcing effective ICs as well as maintaining the Site remedy components.

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site name (from WasteLAN): Woodstock Municipal Landfill		
EPA ID (from WasteLAN): ILD980605943		
Region: 5	State: IL	City/County: Woodstock/McHenry
SITE STATUS		
NPL status: <input checked="" type="checkbox"/> Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify)		
Remediation status (choose all that apply): <input type="checkbox"/> Under Construction <input checked="" type="checkbox"/> Operating <input type="checkbox"/> Complete		
Multiple OUs?* <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Construction completion date: PCOR 09/19/00
Has site been put into reuse? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
REVIEW STATUS		
Lead agency: <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency		
Author name: David Linnear		
Author title: Remedial Project Manager		Author affiliation: EPA Region 5
Review period**: 1/01/2009 to 08/10/2009		
Date(s) of site inspection: 08/05/2009		
Type of review: <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL <input type="checkbox"/> State/Tribe-lead <input type="checkbox"/> Regional Discretion		
Review number: <input type="checkbox"/> 1 (first) <input checked="" type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other (specify)		
Triggering action: <input type="checkbox"/> Actual RA Onsite Construction at OU #1 <input type="checkbox"/> Actual RA Start at OU# _____ <input type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify)		
Triggering action date (from WasteLAN): 08/23/2004		
Due date (five years after triggering action date): 08/23/2009		

* "OU" refers to operable unit.

** Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.

Second Five-Year Review Summary Form, Cont'd.

Issues:

1. The landfill is currently in public ownership and is subject to a City Resolution that prevents groundwater extraction and specified uses. An IC Plan that ensures long-term stewardship through maintaining and monitoring, land and groundwater use restrictions, and a provision for additional ICs such as a Uniform Environmental Covenants Act (UECA) covenant, is appropriate. Ground water downgradient of the landfill still exceeds cleanup standards at one monitoring location. ICs may not be in place downgradient of the landfill.

Recommendations and Follow-up Actions:

1. An IC Plan will be developed to take into account the need for long-term stewardship and evaluate whether ICs are needed for ground water downgradient of the landfill.

Protectiveness Statement:

The remedy selected in the 1993 ROD and 1998 ROD Amendment continues to be protective of human health and the environment in the short term. The existing Site use is consistent with the objectives set forth in the ROD and ROD Amendment. The implemented remedial actions at the Woodstock Municipal Landfill Site are functioning as intended. All immediate threats at the Site have been addressed through capping of the waste material, passive venting of landfill gases, and site fencing. There is no current use of Site ground water that exceeds cleanup standards.

Long-term protectiveness requires maintenance of the cover and compliance with land use restrictions that prohibit interference with the cap, restrict the Site to limited commercial/industrial uses and prohibit groundwater use underneath and downgradient of the landfill. Compliance with ICs will be accomplished by planning for long-term stewardship which includes maintaining, monitoring and enforcing effective ICs as well as maintaining the Site remedy components.

Other Comments:

Date of last Regional review of Human Exposure Indicator (from WasteLAN): September 25, 2006

Human Exposure Survey Status (from WasteLAN): Current Human Exposure Controlled and Protective Remedy in Place

Date of last Regional review of Groundwater Migration Indicator (from WasteLAN): June 21, 2007

Groundwater Migration Survey Status (from WasteLAN): Contaminated Groundwater Migration is under Control

Ready for Reuse (RfR) Determination Status (from WasteLAN): Site is not a candidate for RfR

**U.S. Environmental Protection Agency
Region 5
Second Five-Year Review Report
Woodstock Municipal Landfill Superfund Site
McHenry County, Illinois**

I. Introduction

The purpose of Five-Year Reviews is to determine whether the remedy at a site continues to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports. In addition, five-year review reports identify issues found during the review, if any, and recommendations to address them.

The Agency is preparing this second five-year review report pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 and the National Contingency Plan (NCP). CERCLA Section 121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section 104 or 106, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The Agency interpreted this requirement further in the NCP; 40 Code of Federal Regulations (CFR) Section 300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for the unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

EPA Region 5 conducted the second Five-Year Review of the remedy implemented at the Woodstock Municipal Landfill Site in Woodstock, Illinois ("the Site"). This review was conducted by the Remedial Project Manager (RPM) for the entire Site from January 2009 through August 2009. This report documents the results of the review.

This is the second Five-Year Review for the Woodstock Municipal Landfill Site. The triggering action for this review is the date of the first Five-Year Review for the Site on August 23, 2004. The Five-Year Review is required because waste remains at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE). This review will be placed in the Site files and local repositories for the Site in Woodstock, Illinois.

II. Site Chronology

The Site chronology is tabularized below:

<u>Event</u>	<u>Date</u>
National Priorities List Listing	10/4/89
Remedial Investigation/Feasibility Study complete	6/30/93
Record of Decision signature	6/30/93
Remedial Design start	9/2/94
ROD Amendment signature	7/15/98
Remedial Design complete	2/23/99
Remedial Action start	8/16/99
EPA issued Unilateral Order to PRPs	11/3/99
Remedial construction completion	9/19/00
Preliminary Close-out Report	9/19/00
First Five-Year Review	8/23/04
Consent Decree for Cost Recovery and Remedial Action	10/31/07

III. Background

Physical Characteristics

The Woodstock Municipal Landfill Site in Woodstock, Illinois is a former landfill and dump site that operated from 1935 through 1975. The total volume of refuse in the landfill is estimated to be approximately 4.4 million cubic feet. In addition to municipal waste, various industrial wastes were disposed at the Site, including waste paints and coating materials, plating wastes, solvents, waste materials, inks, and drummed material including polychlorinated biphenyls (PCBs). The contaminants present at the Site posed risks to humans via contact with and ingestion of surface soils and potential consumption of ground water contaminated with vinyl chloride. The Site also posed risks to aquatic organisms via contact with contaminated sediments in the wetland areas on-site. The Site is approximately 42 acres in size.

Land and Resource Use

The Site is located on the south side of the City of Woodstock, Illinois, a municipality with a population of approximately 18,200 residents. The Site is located south of Davis Road, southwest of the intersection of U.S. Route 14 and Illinois Route 47 (see Figure 1.1). Land use immediately north of the Site is primarily residential and agricultural. Land use west of the Site is semi-agricultural with much of the land currently classified as wetland. Wetlands are located adjacent to the Site on the east. The Kishwaukee River runs south along the southwestern perimeter of the Site. The City of Woodstock Wastewater Treatment Plant and additional wetlands are also located south of the Site.

History of Contamination

The Site was first used as a trash dump and for open burning in 1935. The City of Woodstock acquired the landfill property in 1968 and thereafter used the landfill for disposal of household and municipal solid wastes and various industrial wastes, including waste paints and coating materials, plating wastes, solvents, waste materials, inks, and drummed material including PCBs. The City of Woodstock discontinued landfill disposal activities at the Site in 1975, but used the property for land farming of municipal sewage sludge between 1983 and 1988.

Initial Response

The Site was listed on the National Priorities List on October 4, 1989. In September 1989, the City of Woodstock and Allied Signal entered into an Administrative Consent Order with EPA to perform a Remedial Investigation/Feasibility Study (RI/FS) for the Site. The RI/FS was concluded in June 1993. The results of the RI Report indicated that vinyl chloride was present in the ground water at levels that exceeded the Maximum Contaminant Level (MCL) of two parts per billion established under the Safe Drinking Water Act. A test pit excavated during the RI yielded an intact drum containing PCBs (approximately 14 percent), toluene (approximately two percent), iron, mercury, and various volatile and semi-volatile compounds. Contaminants in leachate gas and leachate samples included volatile and semi-volatile compounds. The leachate concentrations for benzene, arsenic, barium, chromium, copper, lead, mercury, and nickel exceeded the associated MCLs for these contaminants. Sediment samples collected from the surrounding wetlands and runoff areas from the landfill contained similar contamination, but at lower concentrations.

Basis for Taking Action

The primary exposure pathway for humans identified during the RI/FS for the Site was direct contact and ingestion of surface soils by trespassers. Unacceptable potential risks were also identified for consumption of leachate/ground water from the Site and consumption of ground water contaminated with vinyl chloride and arsenic by off-site residents. Potential ecological

risks were posed by exposure of terrestrial mammals to surface soils contaminated with copper, mercury, and zinc; exposure of aquatic species to iron; and exposure of migratory birds to chromium, iron, nickel, zinc, polyaromatic hydrocarbons, volatile organics, and semi-volatile organics.

IV. Remedial Actions

Remedy Selection

The Remedial Action selected for the Site in the March 30, 1993 Record of Decision (ROD) included a geosynthetic clay cover or “cap” over the landfill; ground water extraction, treatment, and discharge; cap and ground water monitoring; and institutional controls. The July 15, 1998 ROD Amendment allowed for natural attenuation (monitoring) of the vinyl chloride plume, with ground water extraction, treatment, and discharge as a contingent remedy; and mitigation (as opposed to restoration) of wetland areas impacted by the remedial action. The wetland mitigation was necessary due to the physical impacts on the surrounding wetlands of placing the cap, as revised by the ROD Amendment, on the Site. Vapor intrusion pathways were not evaluated due to the lower vinyl chloride level and lack of receptors downgradient.

Remedy Implementation

On March 30, 1994, EPA issued special notice letters to several PRPs to enter into negotiations for a Consent Decree for Remedial Design and Remedial Action (RD/RA) to implement the March 30, 1993 ROD. By letter on June 3, 1994, and as supplemented by a letter on June 7, 1994, the City of Woodstock (owner) and Allied Signal Corporation (a generator) declined to implement the remedy as outlined in the March 30, 1993 ROD. EPA executed the ROD Amendment on July 15, 1998. On November 3, 1999, after negotiations with the PRPs failed, EPA issued a Unilateral Administrative Order (UAO) to the City of Woodstock and Allied Signal Corporation to implement the Site remedy outlined in the ROD Amendment. A Consent Decree (CD) requiring, among other things, implementation of the remedy contained in the July 15, 1998 ROD was entered on October 31, 2007. By this time, remaining work consisted mainly of operation and maintenance of the remedy.

Preliminary remedial construction began on August 16, 1999, prior to the issuance of the UAO. The construction continued and was completed in September 2000. A Preliminary Close-out Report (PCOR), indicating completion of RA construction activities for the Site, was issued on September 19, 2000.

Remedial Action Objectives (RAO) have either been met (capping of the landfill to block the direct contact pathway) or are progressing in a manner that is acceptable and will result in the RAOs being met in a reasonable time frame (continuing reductions in vinyl chloride concentrations in groundwater monitoring wells), and the monitoring programs will continue to ensure that any changes in contaminant levels will be detected and addressed, if necessary.

The wetland mitigation required by the ROD Amendment has been completed. In 1991, the City of Woodstock passed Resolution No. 635, which places the following restrictions on the Site:

No well of any kind, nature or description, other than wells approved by or required by Environmental Regulating Agencies, including EPA and Illinois EPA as part of any site remediation or monitoring work, and no residential use or structure of any kind shall be located on or shall be built or constructed in or on the following described real estate [legal description of Site].

The Resolution further provides that it be deemed "... a permanent covenant running with the land " and forever binds the City and its successors and assigns, and that it is a "permanent resolution of public policy" and may not be amended or repealed by any subsequent City Council. According to the City, it was recorded with the McHenry County Records Office on September 23, 1991.

Due to the fact that wastes were left in place, via capping of the landfill, annual inspections to determine the integrity of the cap and ground water and leachate monitoring must be conducted. Given that the monitoring programs will continue for a minimum of 30 years from final construction completion, the Woodstock Municipal Landfill Site will not be deleted from the National Priorities List (NPL) for a number of years.

Operations and Maintenance (O&M)

Consultants for the PRPs are conducting long-term groundwater monitoring and Site maintenance activities in accordance with the Final Operation and Maintenance Plan dated February 1999. Current status of the remedy has not changed significantly since the first Five-Year Review. The landfill cap continues to minimize the infiltration of ground water and the passive venting system continues to allow the controlled release of methane. The site security fence remains intact and the landfill is mowed regularly.

Institutional Controls:

Institutional controls (ICs) are required to ensure the protectiveness of the remedy as is described in the ROD and summarized below. ICs are non-engineered instruments, such as administrative and/or legal controls, that help minimize the potential for exposure to contamination and protect the integrity of the remedy. Compliance with ICs is required to assure long-term protectiveness for any areas which do not allow for UU/UE.

Site Description and IC Requirements:

The Woodstock Municipal Landfill Site in Woodstock, Illinois is a former landfill and dump site that operated from 1935 through 1975. The total volume of refuse in the landfill is estimated to

be approximately 4.4 million cubic feet. In addition to municipal waste, various industrial wastes were disposed at the Site, including waste paints and coating materials, plating wastes, solvents, waste materials, inks, and drummed material including PCBs. The contaminants present at the Site posed risks to humans via contact with and ingestion of surface soils and potential consumption of ground water contaminated with vinyl chloride. The Site also posed risks to aquatic organisms via contact with contaminated sediments in the wetland areas on-site. The Site is approximately 42 acres in size.

The groundwater cleanup goals for the Site were based on containment; i.e., they are to be achieved at the waste boundary. The ROD states that the Woodstock Municipal Landfill Site should be capped, maintained and monitored. The ROD also required institutional controls to prohibit construction and to prohibit groundwater use at the Site.

Land use restrictions called for in the ROD include the following:

- There can be no residential, agricultural or commercial use of the Site except uses that already existed.
- That no excavation, construction or drilling or any other activity which may damage any remedial action component can take place at the Site.
- That groundwater wells for drinking water or domestic purposes shall not be installed at the Site.
- That there shall be no use of the property that would allow the continuous presence of humans at the Site.
- That fencing and warning signs at the Site be maintained.
- That no waste material from off-site shall be transported to the property.

The CD requiring implementation of the remedy contained in the July 15, 1998, ROD was entered on October 31, 2007. The CD also contains specific IC requirements for access, conducting IC evaluation activities (such as title work) and implementing and recording an approved IC instrument.

The table, on the following page, summarizes institutional controls for these restricted areas.

Table 1: Institutional Controls Summary Table

Media, Engineered Controls, & Areas that Do Not Support UU/UE Based on Current Conditions.	IC Objective	Title of Institutional Control Instrument Implemented (note if planned)
Woodstock Municipal Landfill Property – which is capped.	Prohibit residential, agriculture and commercial uses; prohibit use except maintenance and assure integrity of the landfill cap	Resolution No. 635 (attached) Resolution does not clearly preclude future agricultural use; accordingly, restrictive covenant preventing such use may be required if all or some of Site is conveyed.
Other Remedial Components	Prohibit interference with remedy component except proper maintenance	Resolution No. 635
Ground water – Exceeds cleanup standards under landfill.	Prohibit groundwater use	Resolution No. 635
Ground water – Exceeds cleanup standard at one monitoring well downgradient of landfill.	Prohibit groundwater use until cleanup standards are achieved	An IC, such as an environmental covenant to prohibit groundwater extraction may need to be put in place.

Maps which depict the current conditions of the site and areas which required restrictions will be developed as part of the evaluation of ICs or IC Plan.

Current Compliance: Based on the Site inspection and data, no inappropriate land or groundwater use was observed. EPA is not aware of site or media uses which are inconsistent with the stated objectives of the ICs and cleanup goals. Cleanup goals for ground water are based on containment for ground water; they are to be met at the waste boundary. The Site is zoned for industrial use. The physical barriers remain in place and access is further restricted by use of warning signs. The integrity and effectiveness of the landfill cap is determined through routine monitoring which measures both settlement and lateral movement. No waste material has been transported from off-site and disposed of on the property. As mentioned, based on inspections, monitoring data and interviews with officials, there appears to be no inappropriate Site and groundwater uses and no apparent violations of the ICs. Long-term protectiveness requires compliance with the ICs for the land use restrictions.

Therefore, at this time, the remedy appears to be functioning as intended since the property is not being used in a manner which is inconsistent with the required use restrictions or ICs. Hence, the remedy is protective in the short term. However, long-term protectiveness requires compliance with effective ICs.

Status of ICs and Follow-up Actions Required

IC Evaluation Activities: Initial IC evaluation activities have revealed that some ICs are in place. With regard to governmental controls, the Site is zoned commercial/industrial, and prohibits the construction of drinking water wells within the landfill property per Resolution 635. Also,

Resolution No. 635 was approved by the Woodstock City Council on September 17, 1991 and recorded with the McHenry County Recorder's Office on September 23, 1991, and states no well shall be installed on site property except for wells approved or required by EPA and Illinois EPA. Because the ROD's description of required use restrictions includes a prohibition on agricultural use and there is no express prohibition on such use in Resolution 635, there is a slight possibility that the City could, at some future date, convey an interest in some or part of the Site to a new owner or user who could engage in agricultural use. Similarly, the ROD prohibits uses that involve "the continuous presence of humans;" however, a new owner or lessor could, consistent with the Resolution, put a portion of the Site to such use. The October 31, 2007, Consent Decree requires the City to give EPA advance notice of any such conveyances, and also requires the City to ensure that effective ICs are in place.

Additionally, natural attenuation of groundwater contamination appears to continue; however, one of the monitoring wells exceeds MCLs. The Consent Decree obliges the settling parties to use best efforts to impose use restrictions on property beyond the Site boundary. The IC Plan will evaluate the need for additional ICs over the ground water downgradient of the landfill.

EPA will request that the Woodstock Municipal Landfill PRP group submit a short work plan that addresses Resolution enforcement, conveyance-related contingency issues, and the possibility of off-Site groundwater use restrictions. The Work Plan will plan for additional IC activities as needed, including long-term stewardship. Maps are to depict the current conditions of the Site and physical areas, which do not allow for UU/UE. The ICs (including Resolution No. 635 and Ordinance No. 2659) will be reviewed to ensure that the land use restrictions and objectives are stated in and covered by the IC; and title work will be reviewed to confirm proper recording and that no other existing property rights will interfere with the Site remedy or cause undue exposure. Additionally, consideration will be given to preparing and recording a covenant under the newly-enacted Illinois UECA to safeguard against any prohibited uses.

Once the IC work plan is submitted, EPA will determine if any additional steps are necessary to ensure that effective ICs are implemented, monitored, maintained and enforced.

Long-Term Stewardship: Long-term protectiveness at the Site requires compliance with use restrictions to assure the remedy continues to function as intended. To assure proper maintenance and monitoring and effective ICs, long-term stewardship procedures will be reviewed and a plan developed. The plan will call for regular inspection of ICs at the Site and annual certification to EPA that the required ICs are in place and effective. Additionally, development of a communications plan and a one-call system should be explored for long-term stewardship.

V. Progress Since the Last Review

This is the second Five-Year Review for the Site. No further remedial actions have taken place since the initial Five-Year Review. The previous Five-Year Review recommended

implementation of wetland mitigation plan. The PRPs implemented the approved wetland mitigation plan through continued improvements to the existing wetland. This Five-Year Review took note of the recommendation and has reported the results. With respect to enforcement activity since the last review, EPA and the U.S. Department of Justice negotiated a Consent Decree for remedial action and cost recovery, which was entered by the U.S. District Court on October 31, 2007.

The groundwater plume continues to see a drop in the vinyl chloride outside the site boundary. Natural attenuation of Site-related contamination appears to continue. One well downgradient of the landfill continues to exceed groundwater cleanup standards.

The following is the protectiveness statement from the previous Five-Year Review of Woodstock Municipal Landfill Site:

The remedy at the Woodstock Municipal Landfill Site is protective of human health and the environment because the final remedy has been implemented for the Site, and the results of the five-year review sampling indicate that the remedy continues to be protective. EPA will need to continue to monitor the progress of the wetland restoration activities at the Site, which are required due to impacts on wetlands at the Site during remedy implementation.

VI. Five-Year Review Process

Administrative Components

The Woodstock Municipal Landfill Site Five-Year Review was prepared by David Linnear, U. S. EPA RPM. Illinois EPA was notified of the five-year review in 2009. The review was initiated in 2008.

From December 2008 to June 2009, the RPM reviewed documents, data and developed the second five-year review report.

Community Notification and Involvement

Community involvement and relations ongoing at the Site include responding to local residents' general questions about the progress of the operation and maintenance of the remedy and conducting visits to affected community members when issues and/or concerns arise. Public notice is scheduled to inform the community of significant events and progress at the Site.

Notification, attached, was made to the public of this five-year review report allowing further comments and informing them where to locate a copy of this report if necessary. No one responded and there appears to be no community concerns.

Document and Data Review

For purposes of this review, Woodstock Municipal Landfill Site documents and data reviewed in preparation of this five-year review report includes the following:

Record of Decision for the Woodstock municipal Landfill Site – March 30, 1993
Record of Decision Amendment – July 15, 1998
Amended Unilateral Administrative Order for Remedial Action – November 3, 1993
Preliminary Close-Out Report – September 19, 2000
Comprehensive Five-Year Review Guidance
2003 Annual Monitoring Report for Woodstock Municipal Landfill Site
2004 IC Resolution
First Five Year Review Report - August 2004
2008 Annual Monitoring Report for Woodstock Municipal Landfill Site
Woodstock correspondence file.

In 2008, the Annual Monitoring Report for Woodstock Municipal Landfill Site produced by the Woodstock PRP group showed that the contaminants contained in the landfill remain intact and that levels for the contaminants of concern (COCs) have not increased. Settlement of the cap over the landfill is mostly unchanged and appears to be functioning. Groundwater and gas monitoring concentration results of the past five years remain consistent. Clean up levels have not been achieved, and natural attenuation continues. There is no evidence of migration of any COCs. Normal O&M activities are on-going.

Site Inspection

The Woodstock Municipal Landfill Site is physically inspected annually in accordance with the Operation and Maintenance manual for the Site. The most recent inspection occurred in fall 2008. The results of this inspection are included in the Monitoring Report. The EPA inspected the Site on an additional occasion in conjunction with the Five-Year Review in June 2009. The inspection involved observations of the integrity of the cap and fence on the Site and revealed that there are no visible issues with the cap or fence, and the remedy is functioning as intended.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents? Yes.

Remedial Action Performance

The primary exposure pathway at the Site was direct contact and ingestion of contaminated surface soil, and potential pathways existed for consumption of leachate/ground water on-site and off-site consumption of ground water contaminated with vinyl chloride. The capping of the landfill provides a barrier to the primary exposure pathway, and the cap was intact and had no

breaches during the annual inspection and the EPA inspection in 2009. As indicated by the results of groundwater monitoring data in the Monitoring Report, the remedy has been effective in addressing the ground water contamination at the Site. The vinyl chloride concentrations in ground water are continuing to decline, and the only other contaminants that were present above any applicable standard were iron and manganese, which exceeded the secondary standards (odor, color, taste). Iron and manganese are prevalent in the soil in the area of the Site, and do not pose a health risk at the concentrations found at the Site. In summary, the data gathered during the Five-Year Review indicate that the remedy continues to function as designed, is performing as expected, and that the containment of contaminants is effective.

The remedy for the Site does not include any active operating systems. The Operation and Maintenance (O&M) for the Site consists of annual Site inspections to assess the integrity of the soil cap and make repairs, as needed. These inspections have been and will continue to be an effective means to ensure the cap integrity. There have been no significant problems observed during any of the recent cap inspections.

Since there are no active operating systems at the Site, there are limited opportunities for optimization of O&M. Prior to each Five-Year Review, EPA and/or the PRPs may identify any sampling constituents that may be eliminated from the list of analytes. Since this was the second Five-Year Review, this will be discussed prior to the third Five-Year Review for the Site.

Since there are no active operating systems at the Site, the only early indicators of potential issues would be physical observations of breaches in the cap or increases in the stressed vegetation areas and/or contaminant concentrations in the ground water plume. The data collected for the Five-Year Review indicate that none of these issues are currently present. EPA will continue to provide oversight for the implementation of the wetland restoration activities, which started in 2005.

Institutional controls for the landfill have been put into place by the City of Woodstock. An IC Plan should be prepared and evaluated to ensure long-term protectiveness of the landfill-area ICs, and to evaluate whether ICs are necessary to prohibit use of ground water downgradient of the landfill.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and RAOs used at the time of the remedy still valid? Yes.

There have been no changes in standards or To Be Considered criteria since the start of remedial construction at the Site.

There have been no changes in the potential exposure pathways at the Site since the implementation of the remedy for the Site. There have been no land use changes at the Site; however, plans have been tentatively discussed for reuse of the Site.

Neither the toxicity factors for the COCs nor other contaminant characteristics have changed in a way that could affect the protectiveness of the remedy.

Standardized risk assessment methods have not changed in a way that could affect the protectiveness of the remedy.

The remedy for the Site is progressing as expected. The RAOs have either been met (capping of the landfill to block the direct contact pathway) or are progressing in a manner that is acceptable and will result in the RAOs being met in a reasonable time frame (continuing reductions in vinyl chloride concentrations in ground water monitoring wells), and the monitoring programs will continue to ensure that any changes in contaminant levels will be detected and addressed, if necessary.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy? No.

There have been no newly identified ecological risks, impacts from natural disasters, or any other information that has been identified that could affect the protectiveness of the remedy for the Site. Although there is an exceedance of MCLs in one of the monitoring wells, the COCs continue to decrease site wide.

VIII. Issues

Issue	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
The landfill is currently in public ownership and is subject to a City Resolution that prevents groundwater extraction and specified uses. An IC Plan that ensures long-term stewardship through maintaining and monitoring, land and groundwater use restrictions, and a provision for additional ICs such as a UECA covenant, is appropriate. Ground water downgradient of the landfill still exceeds cleanup standards at one monitoring location. ICs may not be in place downgradient of the landfill.	N	Y

IX. Recommendations and Follow-up Actions

Recommendations/ Follow-up Actions	Party Respon- sible	Oversight Agency	Mile- stone Date	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
An IC Plan will be developed to take into account the need for long-term stewardship and evaluate whether ICs are needed for ground water downgradient of the landfill.	PRP Group in conjunction with EPA and Illinois EPA	EPA and Illinois EPA	July 2010	N	Y

X. Protectiveness Statement

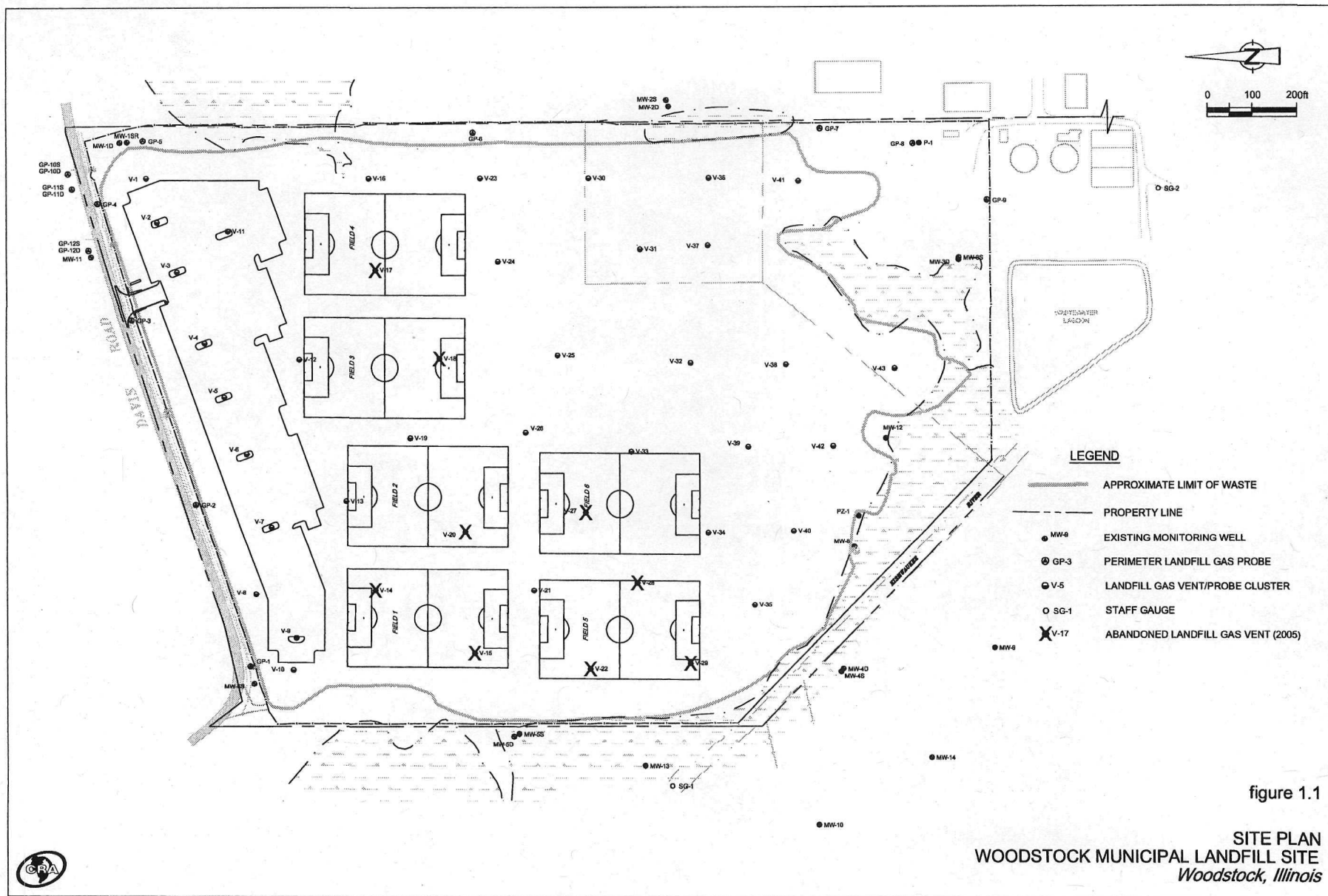
The remedy selected in the 1993 ROD and 1998 ROD Amendment continues to be protective of human health and the environment in the short term. The existing Site use is consistent with the objectives set forth in the ROD and ROD Amendment. The implemented remedial actions at the Woodstock Municipal Landfill Site are functioning as intended. All immediate threats at the Site have been addressed through capping of the waste material, passive venting of landfill gases, and

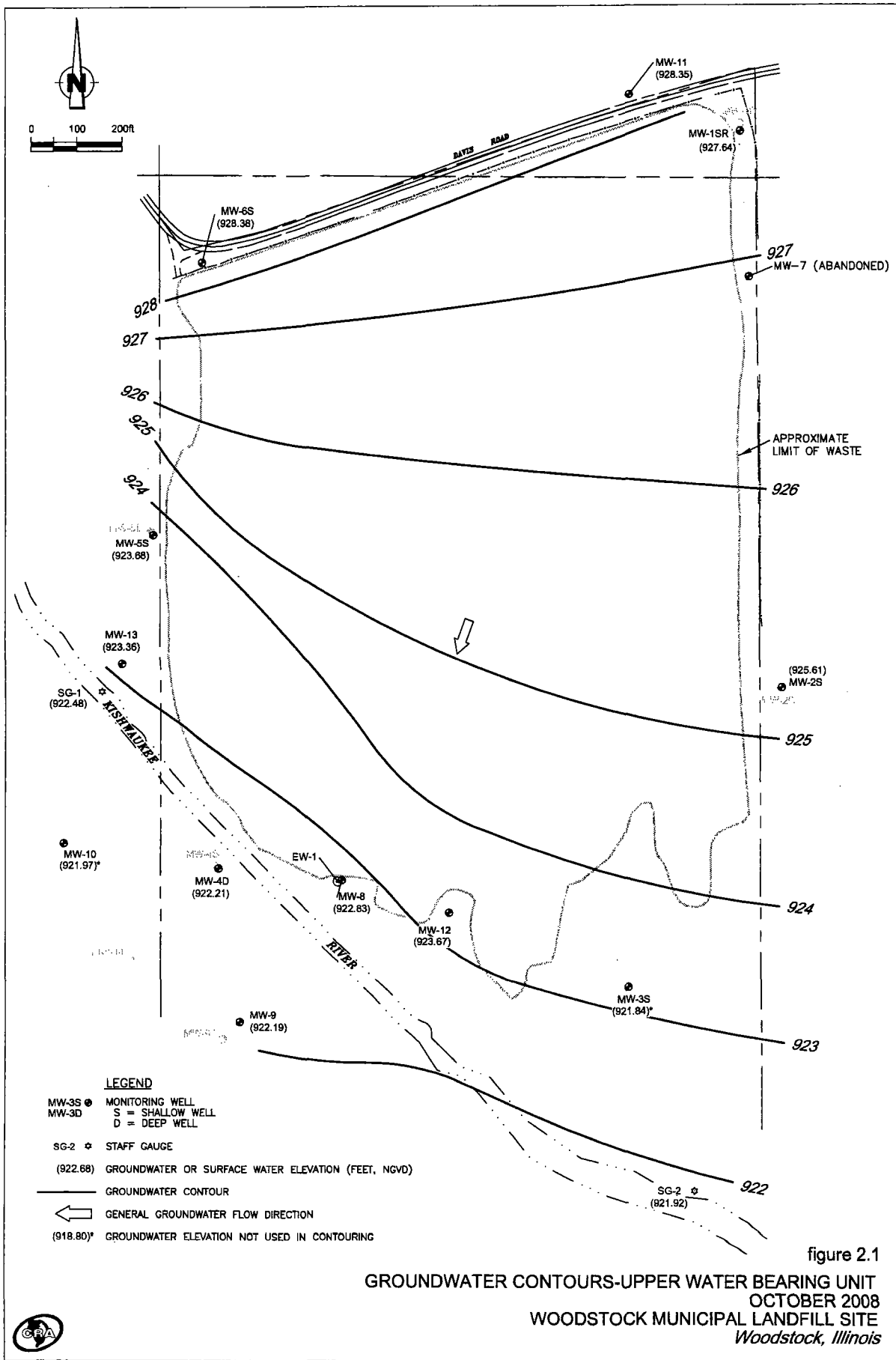
site fencing. There is no current use of Site ground water that exceeds cleanup standards.

Long-term protectiveness requires maintenance of the cover and compliance with land use restrictions that prohibit interference with the cap, restrict the Site to limited commercial/industrial uses and prohibit groundwater use underneath and downgradient of the landfill. Compliance with ICs will be accomplished by planning for long-term stewardship which includes maintaining, monitoring and enforcing effective ICs as well as maintaining the Site remedy components.

XI. Next Five-Year Review

The next Five-Year Review for the Woodstock Municipal Landfill Site is required no later than 5 years from the date of this report.





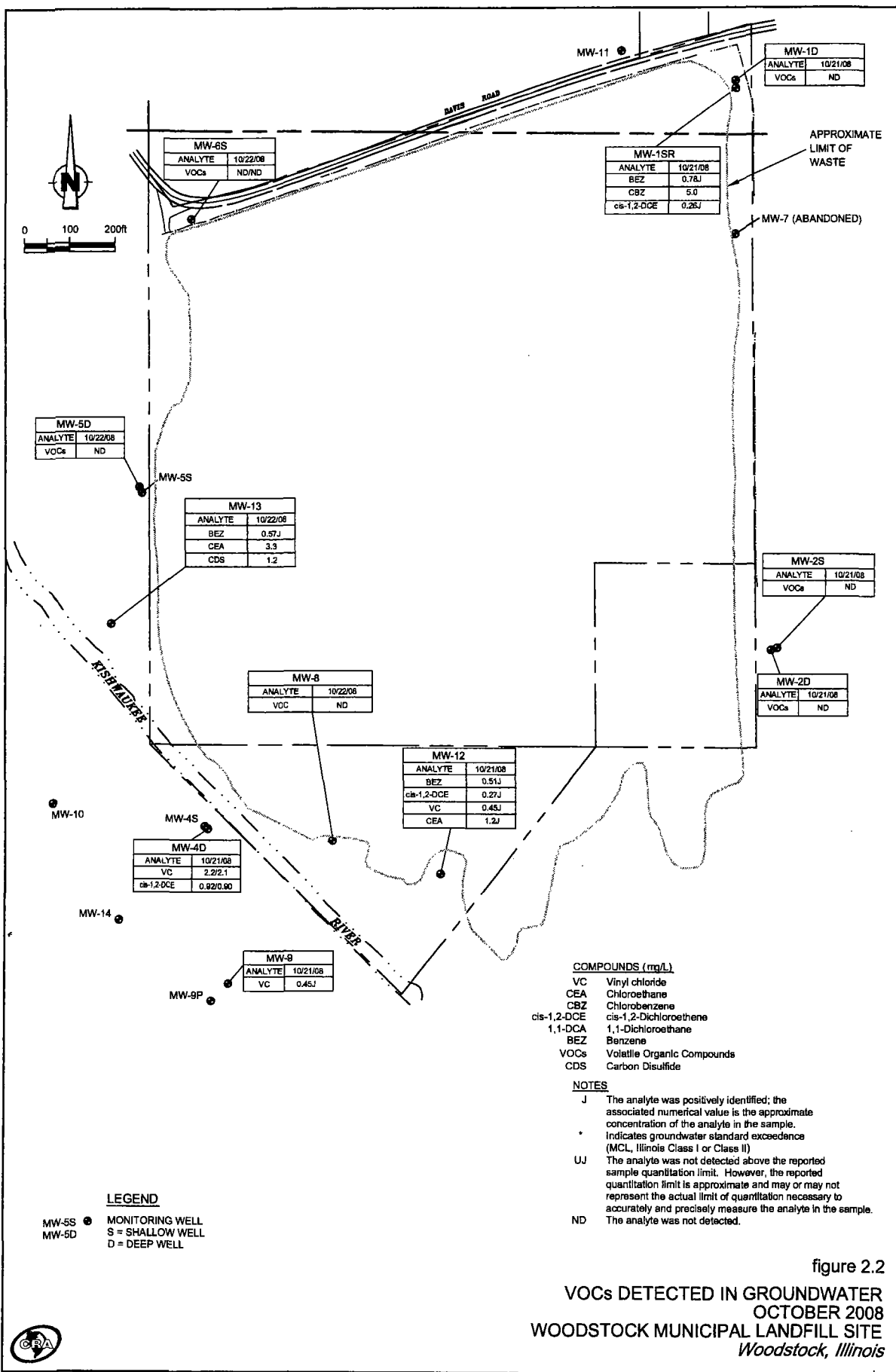


figure 2.2
VOCs DETECTED IN GROUNDWATER
OCTOBER 2008
WOODSTOCK MUNICIPAL LANDFILL SITE
Woodstock, Illinois

ORDINANCE NO. 2659

AN ORDINANCE PROVIDING FOR AN AMENDMENT TO THE WOODSTOCK ZONING DISTRICT MAP TO RECLASSIFY CERTAIN REAL ESTATE FROM THE R1S RESIDENTIAL ZONING DISTRICT TO THE M2 GENERAL MANUFACTURING DISTRICT OF THE ZONING ORDINANCE OF THE CITY OF WOODSTOCK, McHENRY COUNTY, ILLINOIS.

WHEREAS, the City of Woodstock is the owner of the real estate hereinafter described; and,

WHEREAS, the real estate hereinafter described was formerly used as the Woodstock Municipal Landfill, which has been closed, pursuant to the order of the Illinois Environmental Protection Agency (IEPA) and is now the subject of an environmental clean-up initiated by the United States Environmental Protection Agency (USEPA) pursuant to the authority of the "Comprehensive Environmental Response, Compensation and Liability Act" (CERCLA); and,

WHEREAS, the City Council of the City of Woodstock, McHenry, Illinois, has heretofore adopted a resolution entitled:

"RESOLUTION NO.: 635"

"RESOLUTION CREATING A COVENANT RUNNING WITH THE LAND ON A MUNICIPAL LANDFILL OF THE CITY OF WOODSTOCK, McHENRY COUNTY, ILLINOIS."

which provides that no well of any kind, nature or description, other than wells approved by or required by environmental regulating agencies, including the USEPA and the IEPA as part of any site remediation or monitoring work, and no residential use or structure of any kind shall be located or built upon or constructed in or on said real estate; and,

WHEREAS, notice of a public hearing before the Woodstock Plan Commission was published in a newspaper of general circulation in the City of Woodstock, McHenry County, Illinois, in the manner provided by law and also served upon the owners of property within 300' of the subject property; and,

WHEREAS, the Plan Commission of the City of Woodstock, McHenry County, Illinois, convened a public hearing on the request of the City of Woodstock to rezone the property from the R1S Residential District to the M2 General Manufacturing District and amend the zoning district map accordingly on October 24, 1996, which hearing was continued to and finally concluded on December 5, 1996; and,

WHEREAS, the Plan Commission of the City of Woodstock, McHenry County, Illinois, has recommended to the City Council of the City of Woodstock, McHenry County, Illinois, the reclassification of said real estate to the M2 General Manufacturing District of the City:

NOW THEREFORE BE IT ORDAINED by the City Council of the City of Woodstock, McHenry County, Illinois, as follows.

Section One: The following described real estate:

The northwest quarter of the southeast quarter of Section 17, and the southwest quarter of the northeast quarter of Section 17, (excepting and reserving therefrom that part thereof bounded and described as follows to -wit: Beginning at a post at the northwest corner of the last described forty; thence east 8 chains 17 links to a post; thence south 74 and 1/2 degrees west 8 chains and 48 links to a post; thence north 2 chains and 50 links to the place of beginning. ALSO: A part of the northwest quarter of the northeast quarter of said Section 17, bounded and described as follows: Beginning at the southeast corner of said last above described forty; thence west 11 chains and 77 links; thence north 74 and 1/4 degrees east 12 chains and 22 links to a post; thence south 3 chains and 60 links to the place of beginning, all in Township 44 North, Range 7 East of the Third Principal Meridian in the City of Woodstock, McHenry County, Illinois.

be and the same is hereby reclassified from the R1S Residential District to the M2 General Manufacturing District as defined by the zoning ordinance of the City of Woodstock, McHenry County, Illinois.

Section Two: All maps, plats and journals and other records of the City reflecting the official classification of real estate pursuant to the Woodstock Zoning Ordinance, including but not limited to the zoning district map of the City, be and the same are hereby amended to reflect the reclassification provided for in Section One hereof.

Section Three: That the report and recommendation of the Plan Commission of the City of Woodstock, McHenry County, Illinois, be and the same is hereby approved.

Section Four: This Ordinance shall be known as Ordinance No: 2659 and shall be in full force and effect from and after its passage and approval as is provided by law.

PASSED BY THE CITY OF COUNCIL OF THE CITY OF WOODSTOCK, McHENRY COUNTY, ILLINOIS AND APPROVED BY ME THIS 7TH DAY OF JANUARY, 1997.

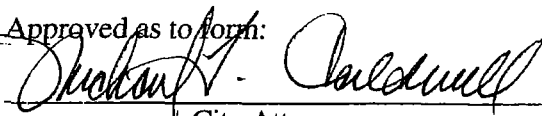

MAYOR

PASSED: 1/07/97

APPROVED: 1/07/97

ATTEST:


CITY CLERK

Approved as to form:

City Attorney



City of
WOODSTOCK

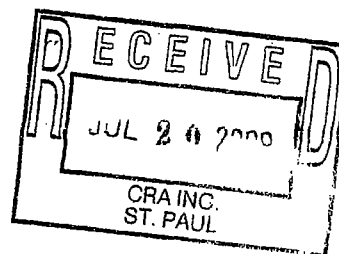
17224

MN FILE COPY

Department of Public Works
326 Washington Street
Woodstock, Illinois 60098
815/338-6118 • fax 815/334-2263
pwwd@woodstock-il.com
www.woodstock-il.com

June 11, 2004

Mr. Brad Bradley
Remedial Project Manager
Superfund Division
United States Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590



RE: Woodstock Landfill Institutional Controls

Dear Mr. Bradley:

Attached is a copy of the Resolution approved by the Woodstock City Council establishing institutional controls on the former landfill site. The document was recorded with the McHenry County Record's Office on September 23, 1991 and is a covenant against the property.

Sincerely,

John Isbell
Director of Public Works

Cc: Erik Hoglund

RESOLUTION NO. 635

1- Recorder
1- MTC
1- File

RESOLUTION CREATING A COVENANT RUNNING WITH THE LAND
ON THE MUNICIPAL LANDFILL OF THE CITY OF WOODSTOCK,
McHENRY COUNTY, ILLINOIS

WHEREAS, the CITY OF WOODSTOCK, is the owner of the tract of land upon
which the now closed WOODSTOCK MUNICIPAL LANDFILL is located; and,

WHEREAS, the CITY OF WOODSTOCK has been designated as a potentially
responsible party (PRP) by the United States Environmental Protection Agency (U.S.E.P.A.)
pursuant to the provisions of the Comprehensive Environmental Response, Compensation and
Liability Act (CERCLA) and is now participating in a remedial investigation/feasibility study
(RI/FS) pursuant to an administrative order by consent effective October 14, 1989; and,

WHEREAS, it is necessary that the CITY OF WOODSTOCK, McHenry County,
Illinois finally determine the use or uses to which said real estate may be used in the future
and forever prohibit certain activities on said real estate:

The Northwest Quarter of the Southeast Quarter of Section 17, and the
Southwest Quarter of the Northeast Quarter of Section 17, (excepting
and reserving therefrom that part thereof bounded and described as
follows to-wit: Beginning at a post at the Northwest corner of the
last described forty; thence East 8 chains 17 links to a post; thence
South 74 1/4 degrees West 8 chains and 48 links to a post; thence
North 2 chains and 50 links to the place of beginning. ALSO: A part
of the Northwest Quarter of the Northeast Quarter of said Section 17,
bounded and described as follows: Beginning at the Southeast Corner
of said last above described forty; thence West 11 chains and 77 links;
thence North 74 1/4 degrees East 12 chains and 22 links to a post;
thence South 3 chains and 60 links to the place of beginning, all in
Township 44 North, Range 7, East of the Third Principal Meridian in
McHenry County, Illinois.

NOW THEREFORE BE IT RESOLVED by the City Council of the CITY OF
WOODSTOCK, McHenry County, Illinois, that there is hereby created the following
restriction:

Return to: Susan Sullivan
City of Woodstock
PO Box 190
Woodstock, IL 60098

91-41-1210

15

No well of any kind, nature or description, other than wells approved by or required by Environmental Regulating Agencies, including U.S.E.P.A., and Illinois E.P.A. as part of any site remediation or monitoring work, and no residential use or structure of any kind shall be located on or shall be built or constructed in or on the following described real estate:

The Northwest Quarter of the Southeast Quarter of Section 17, and the Southwest Quarter of the Northeast Quarter of Section 17, (excepting and reserving therefrom that part thereof bounded and described as follows to-wit: Beginning at a post at the Northwest corner of the last described forty; thence East 8 chains 17 links to a post; thence South 74 1/4 degrees West 8 chains and 48 links to a post; thence North 2 chains and 50 links to the place of beginning. ALSO: A part of the Northwest Quarter of the Northeast Quarter of said Section 17, bounded and described as follows: Beginning at the Southeast Corner of said last above described forty; thence West 11 chains and 77 links; thence North 74 1/4 degrees East 12 chains and 22 links to a post; thence South 3 chains and 60 links to the place of beginning, all in Township 44 North, Range 7, East of the Third Principal Meridian in McHenry County, Illinois.

BE IT FURTHER RESOLVED that this restriction shall be deemed a permanent covenant running with the land which shall forever bind the CITY OF WOODSTOCK, McHenry County, Illinois, and its successors and assigns in perpetuity.


BE IT FURTHER RESOLVED that this resolution is a permanent resolution of public policy of the CITY OF WOODSTOCK and may not be amended or repealed by any subsequent City Council.

91R 36255

BE IT FURTHER RESOLVED that this resolution be spread at length upon the minutes of the meeting of this City Council and recorded in the Office of the Recorder of Deeds, McHenry County, Illinois.

ADOPTED BY THE CITY COUNCIL OF THE CITY OF WOODSTOCK, McHENRY COUNTY, ILLINOIS THIS 17 DAY OF SEPTEMBER, 1991.

AYES: 5
NAYS: 0
ABSENT: 0


MAYOR

Adopted: 9-17-91
Approved: 9-17-91

ATTEST:


CITY CLERK

APPROVED AS TO FORM:

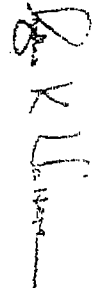

CITY ATTORNEY

Document Prepared by:
Michael T. Caldwell
CALDWELL, BERNER AND CALDWELL
100 1/2 Cass Street, Box 1289
Woodstock, Illinois 60098
Telephone: (815) 338-3300

91R 036255

91 SEP 23 PM 2:26

McHENRY COUNTY
RECORDER
PHYLLIS K. WALTERS



91-41-1212



EPA Reviewing Woodstock Municipal Landfill Superfund Site

Woodstock, Illinois

Environmental Protection Agency, in consultation with Illinois EPA, is conducting a five-year review of the Woodstock Municipal Landfill Superfund site located on the south of Davis Road, southwest of the intersection of U.S. Route 14 and Illinois Route 47, to ensure the cleanup continues to protect people and the environment. The Superfund law requires reviews at least every five years at sites where the cleanup is complete and the site remains managed on-site.

The site was first used as a trash dump and for open burning in 1935. The City of Woodstock acquired the property in 1968 and thereafter used the landfill for disposal of household and municipal solid wastes and various industrial wastes.

The cleanup of contamination at the landfill consisted of capping the landfill, a pump-and-treat system for groundwater, long-term monitoring and limits on use of the site and access to the site. The review found that the cleanup continues to protect people and the environment. EPA will issue a report on the five-year review by August 3, 2009 or sooner. This is the second five-year review for this site.

Information on the Woodstock Municipal Landfill Superfund site can be found at the Woodstock Public Library, 1000 E. St., Woodstock, Ill., and at www.epa.gov/region5/sites/woodstock.

EPA encourages public comment. Written comments should be postmarked no later than June 30, 2009. You may also communicate your questions or concerns by telephone or e-mail. If you have questions or need more information, contact:

David Linnear

Remedial Project Manager
Superfund Division (SR-6J)
EPA Region 5
77 W. Jackson Blvd. Chicago, IL 60604
312-886-1841
linnear.david@epa.gov

Janet Pope

Community Involvement Coordinator
Superfund Division (SI-7J)
EPA Region 5
77 W. Jackson Blvd. Chicago, IL 60604
312-353-0628
pope.janet@epa.gov

Or call toll-free, 800-621-8431, weekdays, 8:30 a.m. to 4:30 p.m.

AD Rao
5/1/09

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